

Work Order ID 82689

April-04-12 1:59:25 PM

82689

Page 1

Item ID: D3183-044 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Bracket Assembly
 Start Date: 04/04/2012 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 18/04/2012 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: MLJ Date: 12/04/05 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3183	Rev C1								
100	BAND SAW	0.00							
100									
Bandsaw	Memo	0.00							
Jeaspa Bandsaw	Cut blanks: (1.500" x 2.250") 5.500" long								
110	HAAS CNC VERTICAL MACHINING #1	0.00							
110									
HAAS 1	Memo	0.00							
HAAS CNC vertical machine #1	1-Machine D3183-4 as per Folio FA322 and Dwg D3183Identify as D3183-42-Deburr3-Scribe batch number								
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120									
QC	Memo	0.00							
Quality Control									

amr 12/04/29

4 6

ET 12-05-04

(P40) →

ET 12-05-04

W/O: 82689		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3183-044 PAR #: _____ Fault Category: Machin NCR: ☒ Yes No DQA: [Signature] Date: 12/05/14
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: [Signature] Date: 12/5/14

NCR: 12-11415		WORK ORDER NON-CONFORMANCE (NCR) 388.12						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12-05-04	110	Part came loose in Fixture removed too much mat'l + pulled part off fixture R.L. Process	12-05-04 GS1042 [Signature]	Scrap + replace x1 w/ 121026	12-05-04 [Signature]	12-05-04 GS1042 [Signature]	[Signature]	[Signature]

NOTE: Date & initial all entries

Work Order ID 82689

82689

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Item ID: D3183-044 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Bracket Assembly
Start Date: 04/04/2012 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 18/04/2012 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: * _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00	B.A	12/05/07		41	0		
140 *140* Small Fab Small Fab	Small Fab Memo Assemble D3183-043 as per Dwg D3183.	0.00 0.00				4x			<i>[Signature]</i> 2/25/08
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00		8/2/07/08		(40)			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

82689

Page 3

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 04/04/2012 **Start Qty:** 4.00 ***4***

Cust Item ID:

Required Date: 18/04/2012 **Req'd Qty:** 4.00 ***A***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Identify as per dwg & Stock Location: ST 23B 0.00

160

Packaging

Packaging

Memo

0.00

4x

8

125-8

170

QC21- Final Inspection - Work Order Release	0.00
---	------

170

QC

Quality Control

Memo

0.00

12/5/8 *AD*

YMK
12-05-08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-04-12 1:59:29 PM

Page 1

Work Order ID: 82689

82689

Parent Item: D3183-044

D3183-044

Parent Item Name: Bracket Assembly

Start Date: 04/04/2012

Required Date: 18/04/2012

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP Rev:Pick:A04.02.18New issueKJ/DS

IPP Rev:B Changed Mat Size 08-06-26 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3183-045 *D3183-045* Bearing Assembly		Manufactured	No			100	Each	102.0000	2	8			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST236		102							
				77830		3							
				80903		99							
D3121-21 *D3121-21* Bolt		Manufactured	No			140	Each	4.0000	2	8			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST235		4							
				66969		1							
				74546		3							
M174B1.500X02.250 *M174B1 500X02 250* 17-4 SS Bar 1.50 X2.250		Purchased	No			140	f	28.7479	0.4583	1.929684			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				MAT031		28.7479							
				108309		1.08							
				113568		11.8333							
				115806		3.0846							
				→ 121026		12.75							

**

**

**

EP 12/05/08

EP 12/05/08

B 8262
82

2 on 12/04/29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

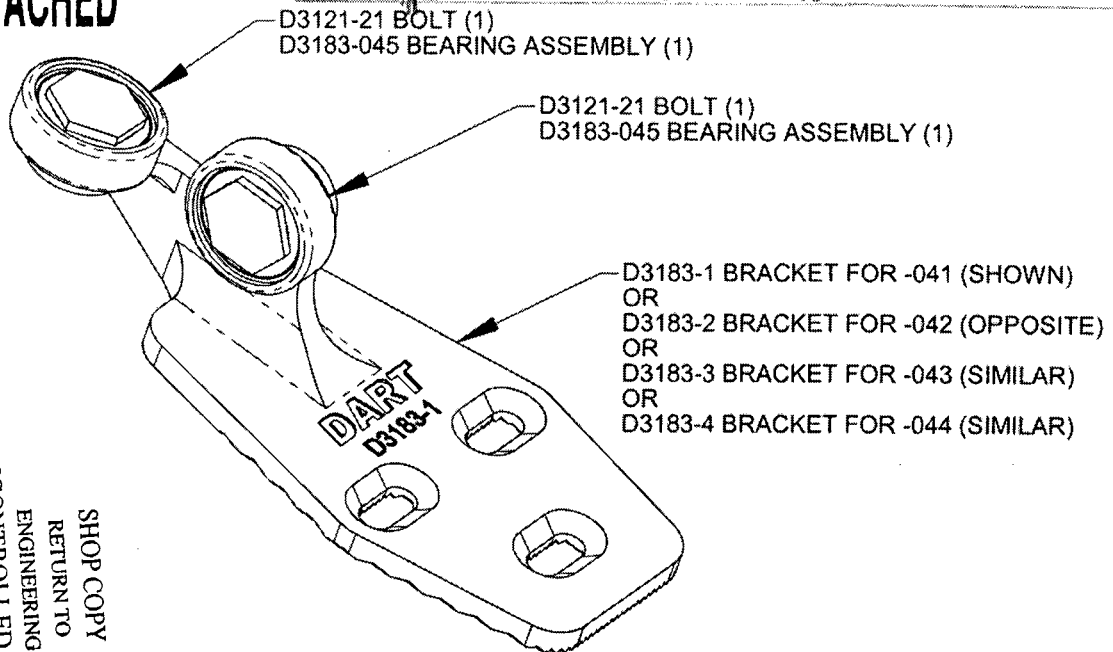
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

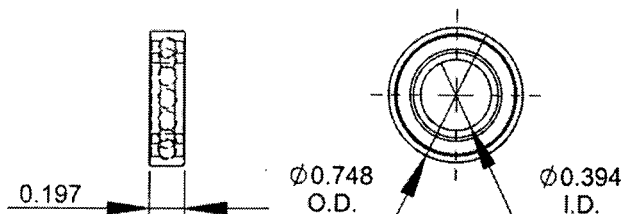


DESIGN #	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3183	REV. C SHEET 1 OF 4
DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:1
A	03.01.24	NEW ISSUE	
B	03.06.17	REMOVE BEARING; 1.012 WS 0.882	
C	04.02.17	ADD -045/-9; 0.182 WAS 0.431	
C1	04.11.09	0.830 WAS 0.850	

RELEASED
04.03.01
DEO ATTACHED

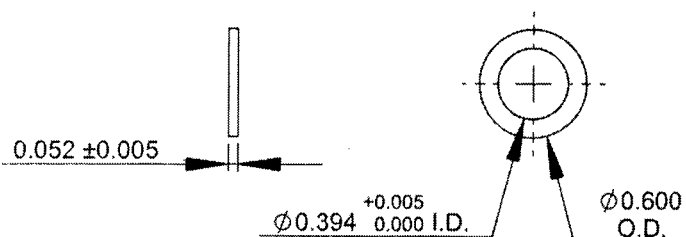


D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR)
D3183-044 BRACKET ASSEMBLY (SIMILAR)



D3183-5 BEARING:
SPECIFICATION CONTROL DRAWING

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES



D3183-7 WASHER

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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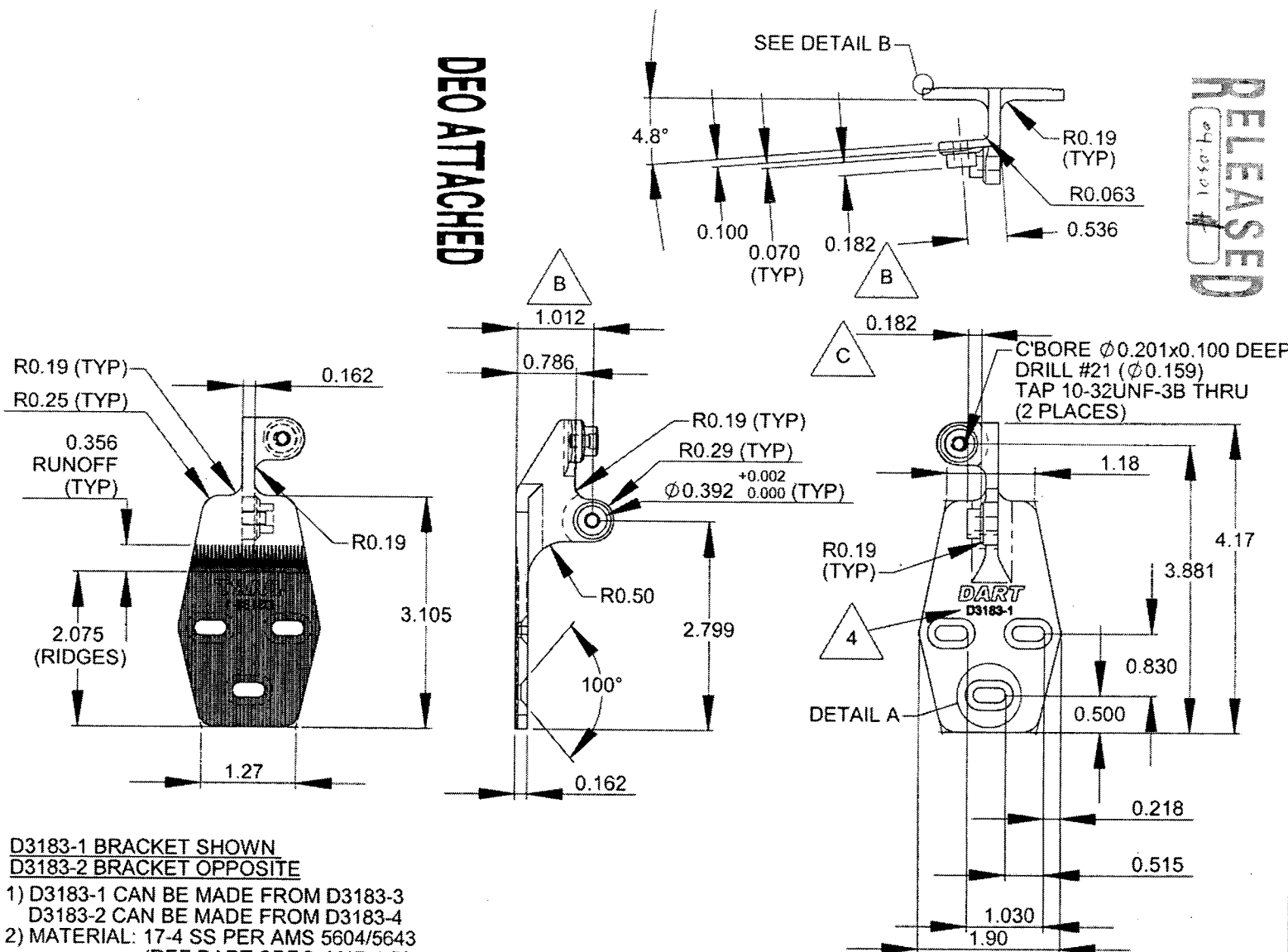
82689



DESIGN	DRAWN BY	DART AEROSPACE LTD
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	DRAWING NO.	REV. C
04.02.17	D3183	SHEET 2 OF 4
TITLE	BRACKET ASSEMBLY	SCALE
		1:2

RELEASED
44-3301

DEO ATTACHED



**D3183-1 BRACKET SHOWN
D3183-2 BRACKET OPPOSITE**

- 1) D3183-1 CAN BE MADE FROM D3183-3
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

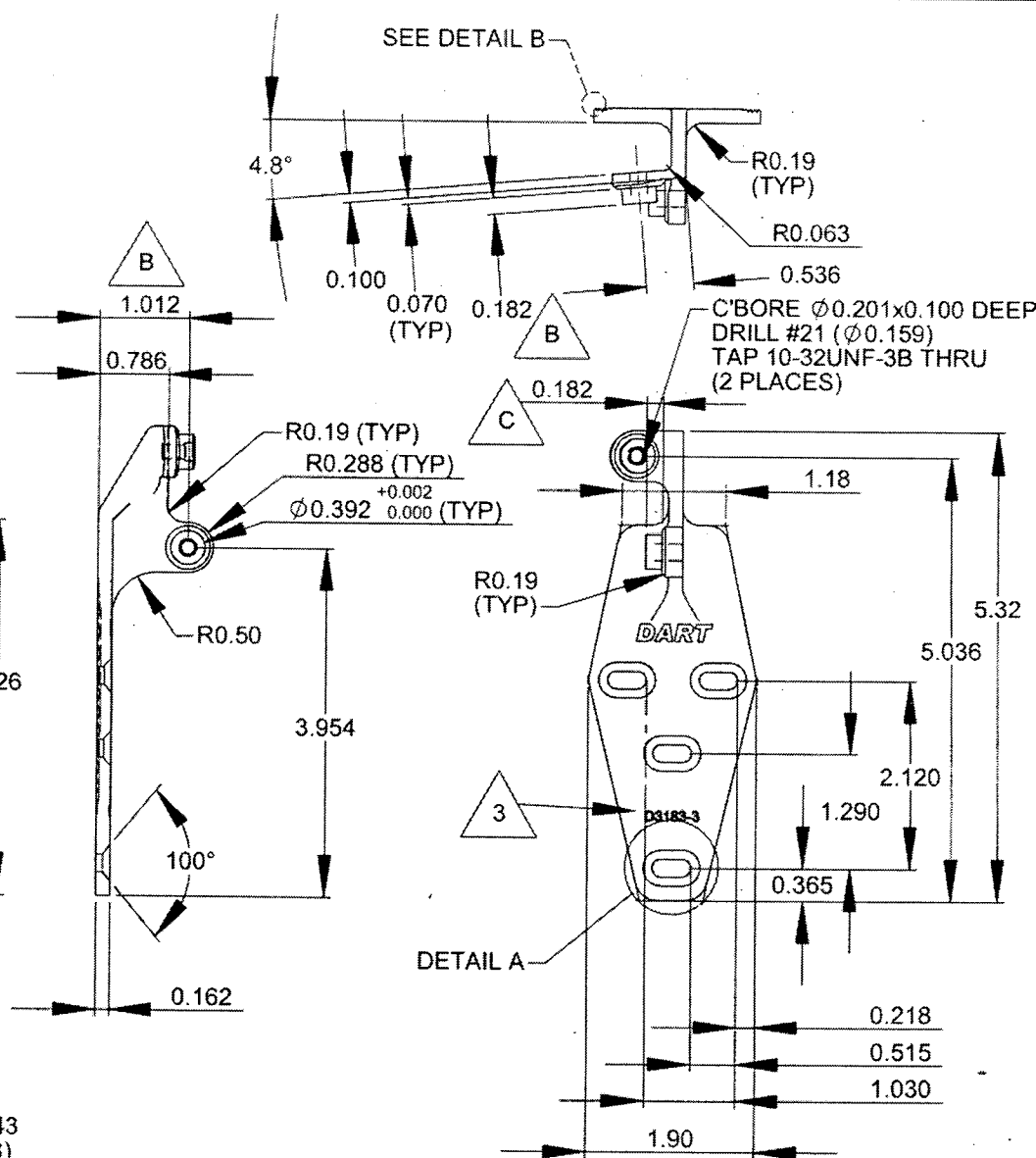
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82689



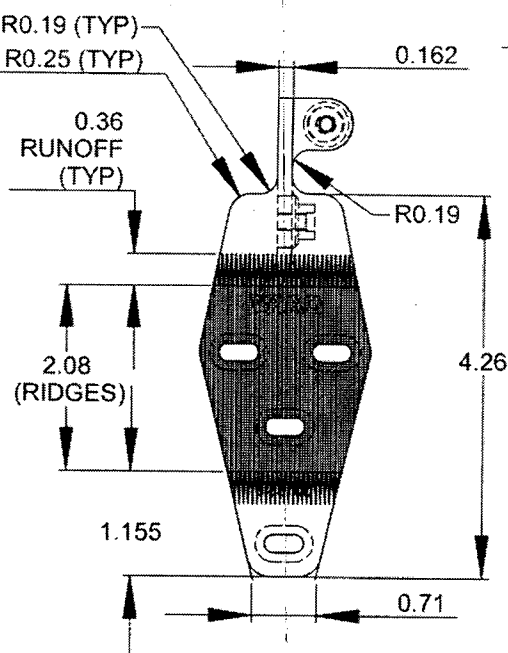
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CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA
DATE	DRAWING NO.	REV. C
04.02.17	D3183	SHEET 3 OF 4
TITLE	BRACKET ASSEMBLY	SCALE
		1:2



DEO ATTACHED

RELEASED

24-03-01



D3183-3 BRACKET SHOWN
(REPLACES BELL P/N 412-030-304-105)
D3183-4 BRACKET OPPOSITE
(REPLACES BELL P/N 412-030-304-106)

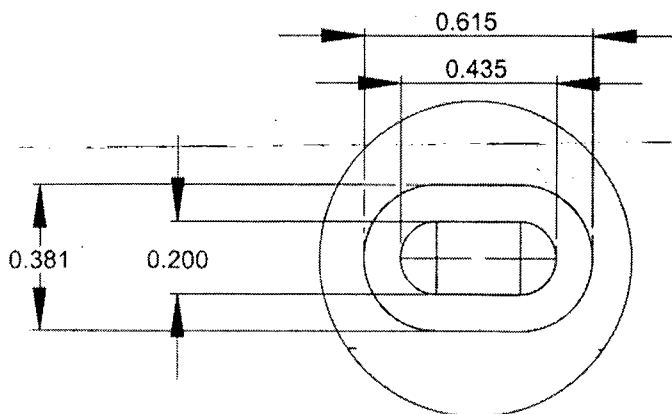
- 1) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) ENGRAVE DART P/N & LOGO AS SHOWN
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

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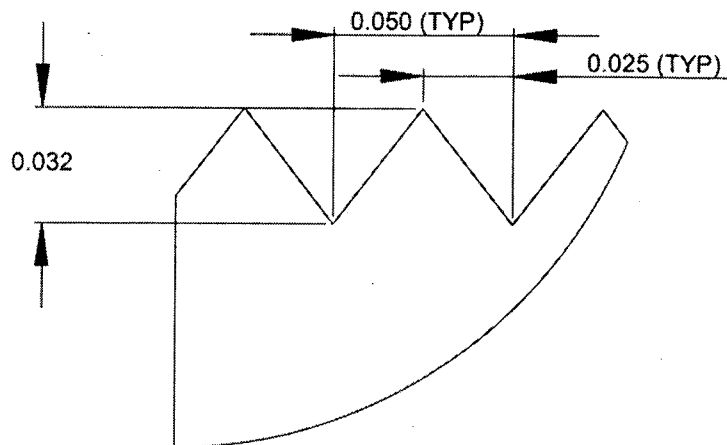
DESIGN 	DRAWN BY 	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 	APPROVED 	DRAWING NO. D3183	REV. C SHEET 4 OF 4
DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:1



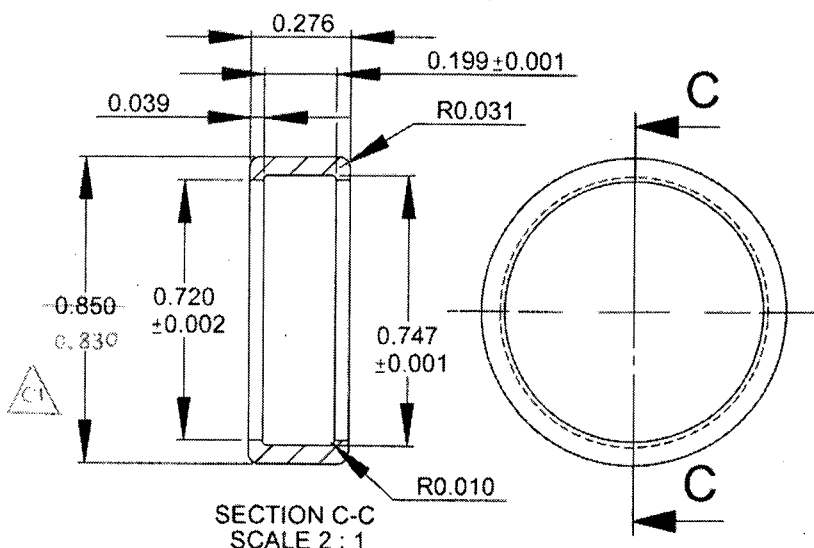
DETAIL A (2 : 1)

RELEASED
04.03.01

DEO ATTACHED



DETAIL B (20 : 1)



D3183-9 CAP

- 1) MATERIAL: DELRIN ROD, Ø1.00
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

D3183-045 BEARING ASSEMBLY

- 1) ASSEMBLE D3183-5 BEARING AND
D3183-9 CAP

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22684

82689

DRAWING NO. D3183	TITLE BRACKET ASSEMBLY	REV.C1	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D3183-C1-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN qp	CHECKED [Signature]	MFG. APPR. [Signature]	APPROVED [Signature]		DE APPR. [Signature]		
DATE 10.05.14	DATE 10.06.30	DATE 10.06.30	DATE 10/06/30		DATE 10/06/30		

D3183-5 BEARING

ADD POSSIBLE SUPPLIER: KML P/N 6800-ZZ

BASIC LOAD RATING REQUIREMENT: Cr = 1720 N (386 lb) MIN [DYNAMIC]
Cor = 840 N (188 lb) MIN [STATIC]

REF PAR 10-012

RELEASED
2010-07-22
[Signature]

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DART AEROSPACE LTD		Work Order: 82689
Description: Bracket		Part Number: D3183-4
Inspection Dwg: D3183	Rev: C1	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.190	+/-0.030	.190	✓		vern	IT-04
R0.063	+/-0.010	.063	✓			
0.182	+/-0.010	.186	✓			
0.070	+/-0.010	.065	✓			
0.100	+/-0.010	.101	✓			
Ø0.201 x 0.100	+/-0.010	.200 x .100	✓			
0.182	+/-0.010	.186	✓			
5.32	+/-0.030	5.339	✓		height gauge	31.006
5.036	+/-0.010	5.046	✓		height gauge	
2.120	+/-0.010	2.127	✓			
1.290	+/-0.010	1.29	✓			
0.365	+/-0.010	.366	✓			
0.218	+/-0.010	.218	✓			
1.030	+/-0.010	1.03	✓			
1.90	+/-0.030	1.89	✓			
1.012	+/-0.010	1.07	✓			
Ø0.201 x 0.100	+/-0.010	.200 x .100	✓			
0.786	+/-0.010	.776	✓		height gauge	
Ø0.392	+0.002/-0.000	.392	✓		vern	
R0.19	+/-0.030	.19	✓			
3.954	+/-0.010	3.955	✓		height gauge	
0.162	+/-0.010	.168	✓			
R0.19	+/-0.030	.19	✓		round gauge	
R0.25	+/-0.030	.25	✓		round gauge	
4.26	+/-0.030	4.264	✓			
2.800	+/-0.030	2.826	✓			
Calculated dimension						
0.162	+/-0.010	.165	✓			
0.615	+/-0.010	.605	✓			
0.435	+/-0.010	.426	✓			
0.200	+/-0.010	.199	✓			
0.381	+/-0.010	.385	✓			
0.032	+/-0.010	.032	✓			

Measured by: JT	Audited by: M.A	Preliminary Approval:	N/A
Date: 12-05-04	Date: 12/05/07	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	03.11.12	New Issue P/O D3183-044	KJ/RF	
B	04.03.15	Changes as per revision C	KJ/JLM/RF	
C	04.06.15	Dimension 2.800 was 2.080; removed 1.155, 0.36 dimensions	KJ/JLM	
D	06.03.09	Dwg Rev update	KJ/JLM	
E	08.01.16	Dimensions revised	KJ/EC/DD	
F	10.09.23	Dimensions revised	KJ	

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

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